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S/020/60/135/006/023/037
B016/B060

11.1210

AUTHORS: Eydus, Ya. T., Nefedov, B. K., Yakovlev, I. P., and
Lobzova, A. V.

TITLE: Alkylation of Cyclohexene Under Conditions of the Reaction
of the Destructive Isobutylene Hydropolymerization

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 6,
pp. 1409-1412

TEXT: The authors describe their experiments in alkylating cyclohexene admixed to an isobutylene-hydrogen mixture. Apparatus and methods were the same as those used in previous experiments (Ref. 1). Preliminary experiments were conducted with the mixtures: cyclohexene - hydrogen (results in Table 1, experiments 1 and 2), and isobutylene - hydrogen (experiments 4 and 6). The following conclusions were drawn from results: cyclohexene is chiefly hydrogenated to cyclohexane in the presence of hydrogen at 190°C and atmospheric pressure at the Co-clay catalyst, and is catalyzed irreversibly. Cyclohexene is to a certain degree alkylated by the CH₂ radicals resulting from its hydro-cracking. In the presence of

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Alkylation of Cyclohexene Under Conditions
of the Reaction of the Destructive
Isobutylene Hydropolymerization

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isobutylene and hydrogen, cyclohexene is by 3.5 to 4 times more strongly alkylated than it would be in a mixture with hydrogen only. It is therefore concluded that isobutylene offers an additional alkylation source and the authors' former scheme of the destructive hydropolymerization of isobutylene seems to be confirmed; one part of the isobutylene molecules decomposes in the presence of hydrogen on the catalyst surface, and cyclohexene is methylated by the resulting radicals. Under equal conditions, but without cyclohexene, these radicals react with the initial isobutylene to form 2-methyl-substituted hydrocarbons. A method by Ya. T. Eydus and T. L. Fedichkina is mentioned (not described in the text, Ref. 8). There are 1 table and 8 Soviet references.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

PRESENTED: July 7, 1960, by B. A. Kazanskiy, Academician

SUBMITTED: June 30, 1960

Card 2/2

YAGUDAYEV, M.R.; POPOV, Ye.M.; YAKOVLEV, I.P.; SHEYNKER, Yu.N.

Frequencies and intensities of infrared absorption bands of the stretching and deformation vibrations of the NH_2 group in primary amines. Izv. AN SSSR Ser. khim. no.7:1189-1196 J1 '64.
(MIRA 17:8)

1. Institut khimii prirodnnykh soedineniy AN SSSR i Institut organicheskoy khimii imeni Zelinskogo AN SSSR.

EYDUS, Ya.T.; NEFEDOV, B.K.; YAKOVLEV, I.P.; LOBZOVA, A.V.

Catalytic hydrocondensation of carbon monoxide with olefins and their hydropolymerization under the action of carbon monoxide and hydrogen. Report 31: Behavior of 2-methyl-1-butene and 3, 3-dimethyl-1-butene in hydrocondensation catalysis. Izv.AN SSSR.Otd.khim.nauk no.6:1127-1134 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Butene) (Catalysis)

BOGDANOVA, A.V.; PLOTNIKOVA, G.I.; YAKOVLEV, I.P.

Derivatives of diacetylene. Report No.9: Synthesis of unsaturated alkoxy- and thioalkyl acetals having C₇ - C₁₅ carbon chain in their molecule. Izv.AN SSSR.Otd.khim.nauk no.10:1841-1846 0 '61.
(MIRA 14:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Acetals) (Butadiyne)

S/048/62/026/010/012/013
B117/B186

AUTHORS: Lopatin, B. V., and Yakovlev, I. P.

TITLE: Determination of the number of methyl and methylene groups in organic compounds containing hetero-atoms by infrared spectroscopy

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 10, 1962, 1288-1290

TEXT: A study was made of infrared spectra ($2800-3100\text{ cm}^{-1}$) of compounds belonging to the furane and tetrafurane series, of boranes and diboranes, and of organo-silicon and organo-germanium compounds in CCl_4 containing O, S, B, Si, and Ge as hetero-atoms. The number of methyl and methylene groups was determined from absorption bands corresponding to the asymmetric stretching vibrations of the CH_2 groups and to the doubly degenerate stretching vibrations of the CH_3 groups. In most cases the position of these bands agreed with averaged data from publications (L. Belilami, *Infrakrasnyye spektry molekul* (Infrared spectra of molecules), p. 16, IL, 1957): $2962 \pm 10\text{ cm}^{-1}$ for the CH_3 groups, and

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Determination of the number of ...

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B117/B186

2926 \pm 10 cm^{-1} for the CH_2 groups. Conclusions: Hetero-atoms produce various effects; for example, the absorption band frequency of the CH_3 and CH_2 groups is noticeably influenced by O, S, and B, but is hardly affected by Si and Ge. The greatest change in frequency was established in the groups closest to the hetero-atom. Hetero-atoms lower the absorption band intensity to a greater extent than alkanes, the effect of O, S, and B being stronger than that of Si and Ge. When several hetero-atoms are present in the molecule their action becomes stronger, but it diminishes rapidly with increasing length of the alkyl radical and virtually ceases when there are more than two links. It is shown that the methods developed for alkanes can also be used to determine the number of CH_3 and CH_2 groups in compounds containing hetero-atoms, but the intensity drop of the two groups closest to the hetero-atom must be allowed for and a corresponding correction has to be made. Using the method proposed by R. N. Jones (Spectrochim. acta, 9, 235 (1957)), it was possible to examine the structure of products obtained by alkylating furane and tetrahydrofurane and to determine the number of CH_3 and CH_2 groups with a relative error of 10-15%. There are 2 figures and 1 table.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskoy of the Academy of Sciences USSR)

Card 2/2

LOPATIN, B.V.; YAKOVLEV, I.P.

Infrared spectroscopy method for determining the number of methyl and methylene groups in organic compounds containing a heteroatom.
Izv. AN SSSR.Ser.fiz. 26 no.10:1288-1290 0 '62. (MIRA 15:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Heterocyclic compounds) (Chemical structure)
(Spectrum, Infrared)

YAKOVLEV, I.P.; MAKSIMOV, Vyach.I.

Structure of α -amino acids with a tertiary atom of nitrogen
studied by the method of infrared spectra. Izv.AN SSSR
Otd.khim.nauk no.5:877-883 My '63. (MIRA 16:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Amino acids—Absorption spectra)

GOL'DFARB, Ya.L.; LITVINOV, V.P.; PETRUKHOV, V.A.; YAKOVLEV, I.P.

Thiophthene series. Report No.4: Quantitative composition of the product obtained by the cyclization of 5-ethyl-2-acetylmercaptothiophene in the presence of aluminum chloride. Izv. AN SSSR. Ser.khim. no.9:1627-1631 S '63.
(MIRA 16:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Thienothiophene) (Thiophene) (Cyclization)

YAKOVLEV, I.P.

Catalytic synthesis of aldehydes and ketones, Part 8: Synthesis
of methyl ethyl, methyl propyl, and methyl phenyl ketones.
Zhur. ob. khim. 33 no.8:2640-2645 Ag '63. (MIRA 16:11)

1. Kostromskoy tekhnologicheskoy institut.

L 33156-66 ENT(m)/EWP(j) JW/RM

ACC NR: AR6016176

SOURCE CODE: UR/0058/65/000/011/D014/D014

AUTHORS: Yakovlev, I. P.; Sheynker, Yu. M.; Popov, Ye. M.

TITLE: Calculation of normal oscillations of methylamine

SOURCE: Ref. zh. Fizika, Abs. 11D96

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 10-18

TOPIC TAGS: molecular spectrum, molecular theory, amine, oscillation, *VIBRATION SPECTRUM*

ABSTRACT: On the basis of a calculation of the vibrational spectra of methylamine and its deuterium derivatives, the authors determine the force field of the molecule. The frequencies and forms of the normal oscillations of methyl- and ethylamine. The characteristic nature of the oscillations pertaining to the amino-group is investigated. It is shown in particular that the frequencies and intensities of the oscillations connected with the NH_3 group in the spectra of different amines are determined essentially by the force and electrooptical parameters of this group. [Translation of abstract]

SUB CODE: 20

Card 1/1

POVAROV, L.S.; GRIGOR, V.I.; YAKOVLEV, I.P.; MIKHAYLOV, B.M.

Some transformations of
3,4,3',2'-tetrahydrofuran-1,2,3,4-tetrahydroquinolines.
Izv. AN SSSR. Ser. khim. no. 1:146-148 '66.

(MLRA 19:1)

1. Institut organicheskoy khimii Im. N.D. Zelinskogo AN SSSR.
Submitted May 5, 1965.

YAKOVLEV, I.P.

Searching for breaks in the insulation of logging cables used with
recording devices. Razved.i prom.geofiz. no.43:130-132 '62.
(MIRA 15:8)

(Logging (Geology))

YAKOVLEV, I. S.

Dissertation: "Transport Capability of the Amu Dar'ya Irrigation Systems." Cand Tech Sci, Inst of Farming, Acad Sci Turkmen SSR, Ashkhabad, 1953. Referativnyy Zhurnal--Mekhanika, Moscow, Jul 54.

SO: SUM No. 356, 25 Jan 1955

YAKOVLEV, I. S.

"The Interrelationship Between the Alluvial Regime of the Irrigation Source and the Irrigation Systems."

Izv. AN Turkm. SSR, No 4, 22-27, 1953

The author attempts to calculate the transporting capacity of channels and the degree of purification in the flow; as indicated in the settling tanks, corresponding to a given transporting capacity of a shielded channel, using the example of the Amurdar'ya irrigation system. He employs the formula of A. G. Khachatryan to determine the transporting capacity. (RZhGeol, No 3, 1954)

SO: W-31187, 8 Mar 55

YAKOVLEV, I. S.

SOV/112-58-1-258

Translation from: Referativnyy zhurnal, Elektrotehnika, 1958, Nr 1, p 37 (USSR)

AUTHOR: Yakovlev, I. S.

TITLE: On the Hydraulic Design of Irrigation Canals on the Basis of the Flow-Carrying Capacity (K gidravlicheskomu raschetu orositel'nykh kanalov po transportiruyushchey sposobnosti potoka)

PERIODICAL: Izv. AN TurkmSSR, 1957, Nr 1, pp 38-45

ABSTRACT: A new method of calculating the transport capacity of irrigation canals is suggested, which differs from the A. A. Uginchus method in that calculation of stream capacity is based on a relationship between silt conditions of the canals themselves and the silt conditions at the source of irrigation. In hydraulic canal design, a desirable degree of clarifying the stream in a settling basin is specified, which secures the desired value of canal transport capacity. Silt conditions in the canals can be calculated for the entire irrigation period. A large number of nomograms to facilitate calculations and examples of canal designs are presented. Bibliography: 4 items.

AVAILABLE: *Turkman Sci Res Inst. Hydrotechnics +* Library of Congress *melioration* Yu. M. S.

Card 1/1

1. Inland waterways--Design
2. Irrigation systems--Performance
3. Hydraulic engineering

YAKOVLEV, I.S.

Filtration losses of water from canals of Tedzhen oasis. Izv. AN
Turk. SSR no.2:33-38 '58. (MIRA 11:4)

1. Turkmenskiy nauchno-issledovatel'skiy institut godrotekhniki i
melioratsii.

(Ashkhabad Province--Irrigation canals and flumes)

YAKOVLEV, I.S.

Characteristics of changes in filtration losses depending on
water discharge in canals. Izv. Otd. geol.-khim. i tekhn. nauk
AN Tadzh. SSR no.1:63-67 '59. (MIRA 14:8)

1. Institut vodnykh problem AN Tadzhikskoy SSR.
(Irrigation canals and flumes) (Seepage)

YAKOVLEV, I.S.

A.N.Kostiakov's formula covering the gross and net water consumption in irrigation canals. Izv. Otd. geol.-khim. i tekhn. nauk AN Tadzh.-SSR 1:23-31 '60. (MIRA 15:1)

1. Institut vodnykh problem AN Tadzhikskoy SSR.
(Irrigation canals and flumes)

YAKOVLEV, I.S.

Determining the ratio between irrigation runoff and drainage waters
with consideration of the mineralization factor. Dokl. AN Tadzh.
SSR 3 no. 2:23-26 '60. (MIRA 14:4)

1. Institut vodnykh problem AN Tadzhikskoy SSR. Predstavleno
7 chlenom-korrespondentom AN Tadzhikskoy SSR V.A. Starikovym.
(Irrigation water)

YAKOVLEV, I.S.

Regularity in the change in the coefficient of efficiency of a canal in relation to the discharge of water. Dokl. AN Tadzh. SSR 3 no.3:25-29 '60. (MIRA 16:2)

1. Institut vodnykh problem AN Tadzhikskoy SSR. Predstavleno chlenom-korrespondentom AN Tadzhikskoy SSR P.A. Pankratovym. (Irrigation canals and flumes)

YAKOVLEV, I. S.

Increase of turbidity along irrigation canals as a result of
filtration losses of water and erosion of the stream bed.

Izv. AN Mold. SSR no.9:76-79 '62. (MIRA 16:1)

(Irrigation canals and flumes)

REZVOV, K.M., kand.tekhn.nauk; PAVLYUCHUK, A.I.; VOLOGZHANINOV, N.I.;
SHKOL'NIK, A.M.; PANIN, G.I.; YAKOVLEV, I.S.

Plastic carburetor floats. Avt.prom. no.2:26-27 F '60.
(MIRA 13:5)

1. Filial Gosudarstvennogo soyuznogo ordena Trudovogo Krasnogo
Znameni nauchno-issledovatel'skogo avtomobil'nogo i avtomotornogo
instituta po toplivnoy apparature.
(Automobiles--Engines--Carburetors)

S/113/60/000/005/004/004
D264/D301

AUTHORS: Rezvov, K.M., Pavlyuchuk, A.I., Candidates of Technical Sciences, Panin, G.I., Vologzhaninov, N.I., Shkol'nik, A.M., Yakovlev, I.S. and Volkov, L.I.

TITLE: Thermal high frequency welding of plastic carburettor floats

PERIODICAL: Avtomobil'naya promyshlennost', no. 5, 1960, 41-43

TEXT: TsNITA has developed a device for the thermal high-frequency welding of carburettor floats made of polycaprolactam. Plain thermal welding was tried but failed to give a reliable hermetic seal. Gluing gave a good seal but required a prolonged drying time. The device (Fig. 3) consists of an ЛГД-1 (LGD-1) high-frequency generator and a semi-automatic welding machine. The use of 2 generator tubes gives a power of 1 kw and a working frequency of 25 Mc. Power from the electric motor 4 is transmitted via a gear train and screw gear to the coaxially mounted cams 5 and 6. The spindle 1 derives its reciprocation from cam 6, while cam 5 serves to trim off the

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Thermal high frequency welding....

S/113/60/000/005/004/004
D264/D301

outer beading and eject the welded float from the bottom punch 3. Welding is regulated by adjusting the gap between the top and bottom punches 2 and 3 (by adjusting the carriage 7) and by varying the feed-back inductance. The punch faces must be positioned in parallel, with a divergence of not more than 0.02-0.03 mm. The punches are also set to ensure the formation of a slight beading of the seam inside the float, since this makes for greater hermeticity. Welding time varies from 5 to 12 seconds, depending on the float size. The method is recommended for introduction in Soviet automobile plants. There are 3 diagrams.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy i konstruktor-skiy institut toplivnoy apparatury avtotraktornykh i statsionarnykh dvigateley (Central Scientific Research and Design Institute for the Fuel Apparatus of Automotive and Stationary Engines)

Card 2/3

PAVLYUCHUK, A.I., kand.tekhn.nauk; YAKOVLEV, I.S.

Using gun-drill tips in machining plunger sleeves of diesel engine
fuel equipment on automatic multispindle lathes. Avt.prom. 29
no.12:36-40 D '63. (MIRA 17:4)

1. Tsentral'nyy nauchno-issledovatel'skiy i konstruktorskiy institut
toplivnoy apparatury avtotraktornykh i statsionarnykh dvigateley.

YAKOVLEV, I.V.

Welding

Some remarks ("Welding and working metals with oxygen torch". Reviewed by I.V. Yakovlev). Avtog. delo 23 nd. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

YAKOVLEV, I.V.

Rapid selection of interchangeable pinions for cutting worm wheels.
Inform.tekh.sbor.no.1:35-39 '54. (MIRA 9:7)

1.Uralvagonzavod.
(Gearing, Worm)

YAKOVLEV, I.V.

Some problems of the laboratory research methods of hydraulic props.
Fiz.-mekh.svois., dav. i razr. gor. porod no. 1: 203-209 '62. (MIRA 16:3)
(Mine timbering)

PLOTNIKOV, Aleksandr Mikhaylovich; YAKOVLEV, Igor' Vasil'yevich

[The SGS-3 hydraulic jack] Gidravlicheskaia stoika SGS-3.
Moskva, Nedra, 1965. 74 p. (MIRA 18:4)

YAKOVLEV, I. Ya.

Melissa

Bee balm in the North. Pchelovodstvo 29 no. 6, 1952

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED

~~YAKOVLEV, K.~~
ROGINSKIY, S., general-leutenant; YAKOVLEV, K., polkovnik.

Some problems of training engineer reconnaissance troops, Voen.-
inzh.zhur.101 no.3:29-34 Mr '57. (MLRA 10:3)
(Military reconnaissance)

YAKOVLEV, K., polkovnik

Achievements of a young officer. Voen.vest. 40 no.2:96 F '61.

(MIRA 14:2)

(Military engineering)

YAKOVLEV, K.

Emery cloth based on liquid glass. Stroitel', no.7:14
Jl '61. (MIRA 14:8)

(Grinding and polishing)

YAKOVLEV, K., polkovnik

Bridgebuilders. Voen. vest. 43 no.12:79 D '63.

(MIRA 17:2)

YAKOVLEV, K., polkovnik

Improving political training. Voen. vest. 41 no.3:8-10 Mr
'62. (MIRA 15:4)

(Russia--Army--Political activity)

YAKOVLEV, K., polkovnik

Pontoon-bridge builders keep their word. Voen. vest. 41 no.9:26-27
S '61. (MIRA 15:1)

(Pontoon-bridges)

RYZHKOV, F., izobretatel'; YAKOVLEV, K., inzh.; LEROV, E., inzh.

A moving plant. Izobr. i rats. no.8:14-15 Ag '61. (MIRA 14:9)
(Building materials)

ACCESSION NR: AP4044678

S/0120/64/000/004/011/70116

AUTHOR: Y. ~~Kovlev~~, K. A., Basin, Yu. G.; Pankrushina, D. K.;
Kovalenko, N. G.; Bezruk, V. P.

73
70

TITLE: Universal through-power meter (wattmeter)

SOURCE: Pribery# i tekhnika eksperimenta, no. 4, 1964, 111-116

TOPIC TAGS: wattmeter, power meter, RF power meter, electronic power meter

ABSTRACT: Intended for high-speed power measurements, such as those employed in r-f field-plasma experimentation, the instrument is based on a multigrid converter tube which yields the $IU \cos \varphi$ function. To reduce the error due to nonlinearity of the working parts of the tube anode-grid characteristics, the phase of one of the r-grid voltages is periodically (with a constant frequency 50 or 250 kc) shifted by 180° . A functional block diagram and simplified

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SOV/138-58-10-1/10

AUTHOR: Yakovlev, K. A.

TITLE: Basic Trends in the Development of the Synthetic Rubber Industry During 1959 - 1965. (Osnovnyye napravleniya razvitiya promyshlennosti sinteticheskogo kauchuka v 1959 - 1965 gg)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 10, pp 1 - 5, (USSR)

ABSTRACT: The Central Committee of the KPSS foresee a 3.4-fold increase in the output of the synthetic rubber industry. The output of synthetic ethyl alcohol is to be increased 2.1-fold by 1966 as compared to 1958. The preparation of synthetic rubber from synthetic and hydrolysed alcohol made it possible to lower the cost and to economise in the consumption of raw materials. A 10-fold increase in output of n-butane is planned for the period 1959 - 1965. Catalytic dehydrogenation of n-butane made it possible to plan the building of factories for synthetic rubber in various regions where n-butane will be used as raw material for the preparation of butadiene. In all these plants copolymerised synthetic rubber (SKMS-30AM) will be manufactured mainly by low temperature polymerisation. Comparative data on the preparation of butadiene from butane and ethyl alcohol is given. Research workers of

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Basic Trends in the Development of the Synthetic Rubber Industry
During 1959 - 1965

the VNIISK, Giprokauchuk, NIISHP etc. are investigating the preparation of sodium butadiene-, butadiene-styrene, and methyl-styrene rubbers. The preparation of isoprene, which is to be used in the manufacture of isoprene rubber, is discussed. The output of isobutane (which is necessary for the manufacture of isoprene) has to be increased 8-fold between 1959 - 1965. Advantages of preparing isoprene by the dehydrogenation of isopentane are pointed out. Experimental data has shown that the wear of tyres prepared from isoprene rubber is increased by more than 30% when compared to tyres made from synthetic rubbers. The manufacture of butyl rubber, which is prepared by the polymerisation of isobutylene with 2 - 3% isoprene, is planned, and the advantages of obtaining the same by the dehydrogenation of isobutyl alcohol are pointed out. Chloroprene rubber is used widely in the rubber industry. Work is to be carried out during the seven-year plan to improve the properties of chloroprene rubber and latex by manufacturing copolymers of chloroprene with styrene, iso-

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SOV/138-58-10-1/10

Basic Trends in the Development of the Synthetic Rubber Industry
During 1959 - 1965

prene and acrylonitrile, and also by carrying out the polymerisation at low temperatures. Improvements in the manufacture of acetylene, which would lower production costs, are suggested. The manufacture of special rubbers such as nitrile silicon, butadiene-methylvinylpyridine, butylacrylate & polyesterified rubbers, butadiene-methylvinylpyridine latex and high styrene latexes SKS-50 and SKS-65 is planned. The manufacture of sodium-butadiene rubber SKB is to be restricted because of its lower qualities as compared to butadiene-styrene and isoprene rubbers. Some of the existing plants for synthetic rubber (Yaroslavl' and Voronezh) will be adapted to manufacture copolymerised rubbers. A table gives data on the percentage of each type of rubber to be manufactured during the seven-year plan, and a further table the

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Basic Trends in the Development of the Synthetic Rubber Industry
During 1959 - 1965

lower costs to be achieved during the same period. There
are 3 Tables.

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YAKOULEV, K. A.

PHASE I BOOK EXPLOITATION

SOV/4579

Konferentsiya po razvitiyu proizvoditel'nykh sil Vostochnoy Sibiri, 1958.
Khimicheskaya sektsiya

Khimicheskaya promyshlennost'; trudy konferentsii (Chemical Industry; Transactions of the Conference on the Development of Production Forces in Eastern Siberia) Moscow, Izd-vo AN SSSR, 1960. 202 p. (Series: Razvitiye proizvoditel'nykh sil Vostochnoy Sibiri) Errata slip inserted. 2,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil. Sibirskoye otdeleniye.

Editorial Board: I.P. Bardin (Deceased) Chief Ed., Academician; M.A. Lavrent'yev, Academician; S.I. Vol'fkovich, Academician, V.I. Dikushin, Academician; V.S. Nemchinov, Academician; V.I. Veyts, Corresponding Member, Academy of Sciences USSR; O.D. Levitskiy, Corresponding Member, AS USSR; N.N. Nekrasov, Corresponding Member, AS USSR; L.V. Pustovalov, Corresponding Member, AS USSR; T.S. Khachaturov, Corresponding Member, AS USSR; N.F. Rostovtsev, Academician, VASKhNIL; A.N. Popov, Corresponding Member, Academy of Building and Architecture USSR; L. Ye. Grafov, Deputy Chairman, Gosplan RSFSR; A.D. Gashev, Member, Gosplan RSFSR; A. Ye. Probst, Professor; V.F. Vasyutin, Professor; V.A. Krotov, Professor;

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Chemical Industry (Cont.)

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P.V. Vasil'yev, Doctor of Economic Sciences; G.I. Lyudogovskiy, Candidate of Technical Sciences; P.A. Letunov, Candidate of Geological and Mineralogical Sciences; and M.G. Shkol'nikov, Candidate of Economic Sciences; Editorial Board of this volume: S.I. Vol'fkovich (Resp. Ed.); G.V. Uvarov, Deputy Chairman, State Committee on Chemistry, Council of Ministers USSR; and V.P. Komarov, Docent; Ed. of Publishing House: A.L. Bankvitser; Tech. Ed.: V.V. Bruzgul'.

PURPOSE: This book is intended for chemical engineers and economic planners concerned with the industrial development of Eastern Siberia.

COVERAGE: This volume is one of a series of 13 containing the Transactions of the Conference on the Development of the Productive Forces in Eastern Siberia. The Conference took place in August 1958. The volume contains summaries of 20 reports presented at the meetings of the Chemical Section of the Conference, brief summaries of pertinent discussions, and the text of resolutions taken by the Chemical Section. The reports deal with the possibilities of developing chemical industries in Eastern Siberia capable of producing artificial fibers, acetylene, plastics, synthetic detergents, synthetic rubber, mineral fertilizers, sulfuric acid, nitrogen, soda, chlorine, etc. No personalities are mentioned. There are no references.

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Chemical Industry (Cont.)

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TABLE OF CONTENTS:

Introduction

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I. REPORTS

Kostandov, L.A. [State Committee on Chemistry, Council of Ministers USSR]
Prospects for the Development of the Chemical Industry in Eastern Siberia

7

Prospects for the Development of Chemical Industries According to the
Materials of Regional Conferences: Krasnoyarskiy kray (N.N. Vorozhtsev,
Corresponding Member, AS USSR), Irkutskaya oblast' (N.I. Yaropolov),
Buryatskaya ASSR (F.N. Gakhanov), and Chitinskaya oblast' (D.B.
Volodarskiy)

16-25

Yakovlev, K.A. [Giprokauchuk State Institute for the Design and Planning
of Rubber-Industry Plants]. Prospects for Developing the Leading Branches
of the Organic Synthesis and High-Polymer Industry in Eastern Siberia

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~~Card 3/10~~

ZINOV'YEV, A.F., YAKOVLEV, K.A.

Basic trends in the utilization of natural and casing-head gases
in the chemical industry in 1960 and in the coming years of the
seven-year plan. Gas.prom. 5 no.4:30-33 Ap '60.

(MIRA 13:8)

(Gas, Natural)

(Chemical industries)

29603

S/120/61/000/004/012/034
E192/E382

9.6000 (1089,1159)

AUTHORS: Yakovlev, K.A., Pankrushina, D.K. and Basin, Yu.G.

TITLE: A pulse-power measuring instrument

PERIODICAL: Priory i tekhnika eksperimenta, no. 4, 1961,
pp. 89 - 91

TEXT: A block diagram of the instrument is shown in Fig. 1. The signals from pick-ups 1 and 2, which are proportional to the current and voltage amplitude (in the right phase) are applied to the voltage dividers 3 and 4. The latter are used for attenuating the signals to the required level necessary for the operation of the converter 5. When the input signals are applied to the converter, a constant amplitude pulse is obtained at its output, the pulse being proportional to the instantaneous active power across the measured load. The peak value of the pulse is recorded by the memory device 6 and is measured by the DC vacuum tube voltmeter 7. The correcting network 8 is employed for the correction of the measurement error of the converter. A calibration generator 9 is used for checking the instrument
Card 1/0 4 ✓

29603

S/120/61/000/004/012/034

A pulse-power measuring instrument E192/E382

during its operation. The electrical circuit of the pick-ups is such as to give a satisfactory amplitude and phase response over the frequency range from 0.8 to 8 Mc/s. The current and voltage ranges for the pick-ups are 50 - 2 100 A and 1 - 15 kV, respectively. The feeders for the pick-ups are in the form of screened cables, type PK-50 (RK-50), 8 m long. The current pick-up (Fig. 2) is in the form of a toroidal coil situated in an electromagnetic screen. The mean diameter of the coil is 150 mm and the cross-section of its winding is

6 cm², the number of turns being 70. The coil resistance is $R_1 = 20$ ohm and the natural resonance frequency of the coil is 15 Mc/s. The voltage pick-up (Fig. 3) is mounted on the toroidal screen of the current pick-up. Its transfer coefficient is 0.01. The quantity $\omega_H C_2 \rho = 3$, which eliminates the frequency-phase errors of the pick-ups. The converter of the instrument is based on a pentode type ГК-71 (GK-71) and the high-frequency pulses from the dividers are applied to the

Card 2/04

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E192/E382

A pulse-power measuring instrument

first and the third grids of this tube. The biasing voltage and the signal amplitudes are chosen so that the operating point of the pentode does not emerge from the linear region of its static characteristics $i_a(u_{g1})$ and $i_a(u_{g3})$. The magnitude of the DC component at the anode of the converter is therefore proportional to the active power $I_H U_H \cos \varphi$ at the load; the increment of the anode voltage level is therefore used as the useful signal. All the high-frequency components of the anode voltage are eliminated by a low-frequency filter having a cut-off frequency of 400 kc/s. During the operation of the converter, a negative video pulse is obtained at the output of its anode filter. The polarity of the pulse is changed by a phase inverter and this is applied to the cathode followers which drive three storage diodes. The parameters of the storage diodes are chosen in such a way that the charge on the capacitance of the last storage cell, which corresponds to the peak value of the pulse, remains constant for about 2-3 sec. The voltage across this storage capacitance is measured by the

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S/120/61/000/004/012/034

A pulse-power measuring instrument E192/E382

valve voltmeter. The calibration generator produces single, amplitude-calibrated video pulses of both polarities; the negative pulse is used to test the storage circuit while the positive pulse is employed to check the converter. The instrument is supplied from the mains via a ferroresonance stabiliser. For the mains changes of $\pm 10 - 15\%$ the change in the instrument reading does not exceed 1%. The instrument does not require recalibration when any of its tubes are replaced since its reading is not changed thereby by more than 2 - 3%. The authors thank N.G. Kovalenko, V.N. Goncharov and V.P. Bezruka for taking part in designing the preliminary models of the instrument. There are 4 figures.

SUBMITTED: November 2, 1960

X

Card 4/4

YAKOVLEV, K.A.; BASIN, Yu.G.; KOVALENKO, N.G.; PANOVA, N.I.

Two-channel current generator. Prib. i tekhn. eksp. 8 no.2:69-72
Mr-Ap '63. (MIRA 16:4)

1. Fiziko-tekhnicheskiy institut AN Gruzinskoy SSR.
(Electric generators)

L 11377-63

BDS

S/120/63/000/002/016/041

45

AUTHOR: Yakovlev, K. A., Basin, Yu. G., Kovalenko, N. G., and Panova, I. I.

TITLE: Two-channel oscillator

PERIODICAL: Priory i tekhnika eksperimenta, March-April 1963, v. 8, no. 2, 69-72

TEXT: The article describes an oscillator for radiofrequency spectroscopy by means of the method of magnetic resonance in molecular beams; the oscillator has two separate oscillating high-frequency fields. The oscillating magnetic fields appear between parallel sections of two current-carrying tuned circuits; the oscillator generates a sinusoidal current with effective values between 5 and 20-25 amp. The minimum frequency deviation over the variation range 0.2-10 kc/min is ± 50 kc. The phase shift of currents in the tuned circuits is set between 0 and 360° ; the phase can be shifted by 180° with a frequency of 220cps. The frequency stability of the oscillator is at least $0.8 \cdot 10^{-4}$.

ASSOCIATION: Physico-technical Institute

Card 1/21

L 11377-63

HDS

S/120/63/000/002/016/041

45

AUTHOR: Yakovlev, K. A., Basin, Yu. G., Kovalenko, N. G., and Panova, I. I.

TITLE: Two-channel oscillator

PERIODICAL: Pribery i tekhnika eksperimenta, March-April 1963, v. 8, no. 2, 69-72

TEXT: The article describes an oscillator for radiofrequency spectroscopy by means of the method of magnetic resonance in molecular beams; the oscillator has two separate oscillating high-frequency fields. The oscillating magnetic fields appear between parallel sections of two current-carrying tuned circuits; the oscillator generates a sinusoidal current with effective values between 5 and 20-25 amp. The minimum frequency deviation over the variation range 0.2-10 kc/min is ± 50 kc. The phase shift of currents in the tuned circuits is set between 0 and 360° ; the phase can be shifted by 180° with a frequency of 220cps.

Card 1/2

11377-63

S/120/63/000/002/016/041

Two-channel oscillator...

The frequency stability of the oscillator is at least $0.8 \cdot 10^{-4}$. There are three figures.

ASSOCIATION: Fiziko-tehnicheskii institut AN GruzSSR (Physico-technical Institute, Academy of Sciences Georgian SSR)

SUBMITTED: April 23, 1962

ja/lb

Card 2/2

YAKOVLEV, K.A.; BASIN, Yu.G.; PANKRUSHINA, D.K.; KOVALENKO, N.G.;
BEZRUK, V.P.

Universal power flow meter. Prib. i tekhn. eksp. 9 no.4:111-
116 J1-Ag '64. (MIRA 17:12)

1. Fiziko-tekhnicheskiy institut Gosudarstvennogo komiteta po
ispol'zovaniyu atomnoy energii SSSR.

L 4248-66

ACCESSION NR: AP5018466

UR/0115/65/000/005/0034/0037
621.317.38

AUTHOR: Yakovlev, K. A.

TITLE: Method for measuring power by multigrid electron tubes

SOURCE: Izmeritel'naya tekhnika, no. 5, 1965, 34-37

TOPIC TAGS: electric power measurement q/m

ABSTRACT: A new method is suggested for measuring active electric power; the method makes use of the multiplying properties of multigrid tubes within a frequency band where the inertia of electrons can be neglected. A double-control tube permits frequency segregation between the desirable and parasitic signals, which ensures good selection of the desirable signal. The phase of one of the signals applied to the control grids is periodically 180°-shifted by a phase switch. A system of filters is so arranged that the output voltage of the phase-keying frequency is proportional to the measurand. On the basis of some results

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L 4248-66

ACCESSION NR: AP5018466

obtained from a laboratory hookup, it is claimed that the new wattmeter is suitable for measuring power at radio frequencies. Orig. art. has: 4 figures and 22 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC

NO REF SOV: 003

OTHER: 000

BVK
Card 2/2

YAKOVLEV, K. F.

YAKOVLEV, K. F. "Producing autoclave wall materials from lime-clay mixtures", *Most. stroit. materialy*, 1948, Issue 8, p. 22-32.

SO: U-3042, 11 March 53, (*Letopis 'Zhurnal 'nykh Statey*, No. 7 1949).

GLUSKER, Il'ya Yakovlevich; MANUILOV, Lev Aleksandrovich; YAKOVLEV, K.F.,
red.; KOZHEMYAKINA, V.P., tekhn.red.

[The Yaroslavl Economic Region] IАroslavskii ekonomicheskii raion.
IАroslavl', IАroslavskoe knizhnoe izd-vo, 1958. 52 p.

(MIRA 13:3)

(Yaroslavl Province---Industries)

SUSLOV, Igor' Mikhaylovich; YAKOVLEV, K.F., red.; PUKHOVTSEVA, A.N.;
KHODINOVA, V.P., tekhn.red.

[Rostov enamel] Rostovskaya enamel'. IAroslavl', IAroslavskoe
knizhnoe izd-vo, 1959. 45 p. (MIRA 13:3)
(Rostov--Enamel and enameling)

DITMAR, A.B., otv.red.; BOGACHEV, V.K., red.; BYTEV, O.N., red.;
IVANOV, A.N., red.; KULEMIN, A.A., red.; ~~YAKOVLEV, K.F.,~~
red.; PUKHOVTSEVA, A.H., red.; KOZHEMYAKINA, V.P., tekhn.red.

[Nature and economy of Yaroslavl Province] Priroda i kho-
ziaistvo IAroslavskoi oblasti. IAroslavl', Iaroslavskoe
knizhnoe izd-vo. Pt.1. [Nature] Priroda: 1959. 381 p.
(MIRA 13:3)

1. Yaroslavl'. Gosudarstvennyy pedagogicheskiy institut.
(Yaroslavl Province--Geography)

KUZNETSOV, N.V.; MAKKOVEYEVA, I.I.; YAKOVLEV, K.F., red.; KHODINOVA,
V.P., tekhn.red.

[Animals of Yaroslavl Province] Zhivtnyi mir IАroslavskoi
oblasti. IАroslavl', IАroslavskoe knizhnoe izd-vo, 1959.
226 p. (MIRA 13:3)
(Yaroslavl Province--Zoology)

21(8)

SOV/56-36-3-54/71

AUTHORS: Poginov, Yu. Ye., Yakovlev, K. I.

TITLE: On the γ -Rays of As^{74} ($O\gamma$ -luchakh As^{74})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
Vol 36, Nr 3, p 940 (USSR)

ABSTRACT: The As^{74} - γ spectrum represented by a figure in this paper was investigated by the authors by means of a single-channel scintillation spectrometer which operated with a NaJ(Ta)-crystal with the photomultiplier FEU-S. The effective curve of the spectrometer was obtained by measuring standard samples with known decay numbers. The lines, energies, and relative intensities observed in the γ -spectrum are shown in a table and are compared with the data obtained by Ye. P. Grigor'yev et al. (Ref 1) and by Horen and Wells (Khoren, Uells) (Ref 2). The following measurements were carried out by the authors of this paper:

Card 1/2

On the γ -Rays of As^{74}

SOV/56-36-3-54/71

| $h\nu$ [keV] | relative intensity |
|---------------|--------------------|
| 610 ± 30 | 1 |
| 960 ± 50 | 0.015 ± 0.008 |
| 1200 ± 30 | 0.023 ± 0.008 |
| 2230 ± 70 | $\sim 10^{-4}$ |

The existence of γ -lines of energies of 1190 and 2220 keV (also Grigor'yev, Horen, Wells) may thus be assumed to be certain. Those with 960 and 1600 (the latter found only by Horen and Wells), must yet be investigated). There are 1 figure, 1 table, and 2 references, 1 of which is Soviet.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: November 21, 1958

Card 2/2

YAKOVLEV, K.

Meat Industry and Trade - Accounting

New rational accounting method. Mias. ind. SSSR 23 no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, August, 1952. UNCLASSIFIED.

YAKOVLEV, K.

Let's simplify and improve accounting. Mias.ind. SSSR 26 no.6:
40-41 '55. (MLBA 9:2)

1.Glavnyy bukhgalter Ministerstva promyshlennosti myasnykh i
molechnykh produktov SSSR.
(Meat industry--Accounting)

YAKOVLEV, K.

Journal - order form of bookkeeping. Moloch. prom. 17 no.6:
32-34 '56. (MLRA 9:10)

1. Ministerstvo promyshlennosti myasnykh produktov SSSR.
(Dairy industry--Accounting)

YAKOVLEV, K.

Let us improve the system of records, accounts and planning.
Mias. ind. SSSR 27 no.4:42-44 '56. (MLRA 9:10)

1. Ministerstvo promyshlennosti myasnykh i molochnykh
produktov SSSR.

(Accounting)

BOGOMOLOV, V.K.; YAKOVLEV, K.K., spetsred.; MOROZOVA, I.I., red.;
GOTLIB, E.M., tekhn.red.

[Accounting and analysis of the management of enterprises
in the dairy industry] Bukhgalterskii uchet i analiz kho-
ziaistvennoi deiatel'nosti predpriatii molochnoi promyshlen-
nosti. Moskva, Pishchepromizdat, 1958. 282 p. (MIRA 12:6)
(Dairy industry--Accounting)

YAKOVLEV, Konstantin Konstantinovich; LAZAROVICH, Gutman Solomonovich;
KOLOSOV, A.M., retsenzents; USHAKOVA, G.V., retsenzents; KORBUT,
L.V., red.; SOKOLOVA, I.A., tekhn. red.

[Analyzing the economic activities of meat and dairy industry
enterprises] Analiz khoziaistvennoi deiatel'nosti predpriatii
miasnoi i molochnoi promyshlennosti. Moskva, Pishchepromizdat,
1963. 173 p. (MIRA 16:10)
(Meat industry) (Dairy industry)

TEREKHIN, S.Ya., inzh.; YAKOVLEV, K.N., arkhitekt

The new Avtozavod bridge. Gor.khoz.Mosk. 36 no.2:6-8 F '62.
(MIRA 16:2)

(Moscow--Bridges)

YAKOVLEV, Konstantin Pavlovich; KRASAVIN, inzhener; nauchnyy redaktor;
KAPLAN, M.Ya., redaktor; PUL'KINA, Ye., A., tekhnicheskiiy redak-
tor.

[A simplified sprayer.] Pistolet-raspylitel' uproschennoi kon-
struktsii. Leningrad, Gos. izd-vo lit-ry po stroit. i arkhitek-
ture, 1954. 30 p. (MIRA 8:3)
(Spray painting)

YAKOVLEV, K. P.

Electric emulsifier for preparing paints. Stroitel'
no.9:11 '58. (MIRA 13:3)

1. Nachal'nik Proizvodstvenno-tekhnicheskogo otdela UNR-4
stroytresta Chuvashskogo sovnarkhoza.
(Paint mixing--Equipment and supplies)

YAKOVLEV, K.P.,

Durable nozzle. Stroitel' no.7:11 J1 '61. (MIRA 14:8)
(Spray painting—Equipment and supplies)

| 1ST AND 2ND ORDERS | | | | | | | | | | | | | | | | | | | | | | | | | | 3RD AND 4TH ORDERS | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>Investigating the absorption of infra-red rays by glass. K. P. Yakovlev, <i>Nauch.-Industriyel. Inst. Stekla No. 1, Stokholmska 70-7(1034).</i>—The basic properties of infra-red rays and methods for their study are reviewed. App. used for their registering (improved by Y.) and absorption spectra obtained with them are discussed. Some kinds of glass absorbing infra-red rays are discussed. M. V. Kondolov</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GROUPS | | | | | | | | | | | | | | | | | | | | | | | | | | SUBGROUPS | | | | | | | | | | | | | | | | | | | | | | | | | |
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| YAKOVLEV, K. P. | | PACELMA AND PROPERTIES INDEX | |
|---|--|------------------------------|--|
| <p><i>The disintegration of the lithium atom by fast protons.</i> K. P. Yakovlev, <i>J. Exptl. Theoret. Phys. (U. S. S. R.)</i> 5, 803 (1965). Fast protons are obtained by an electrostatic process in which the method of supercharging particles in a beam of pos. rays is used. For proton velocities less than 27 kg., no scintillations of the Li deposited on the Pt foil result. On a Li-free foil no scintillation suits up to at least 118 kv. F. H. Rathmann</p> | | | |
| <p>ASS-114 METALLURGICAL LITERATURE CLASSIFICATION</p> | | <p>FROM SOURCE</p> | |
| <p>INDEXED BY DIV ONE</p> | | <p>RELATIONS</p> | |
| <p>INDEXED BY DIV ONE</p> | | <p>RELATIONS</p> | |

YAKOVLEV, K. P.

"Physical Practicum" (Fizicheskiy Praktikum), K. P. Yakovlev, Gostekhizdat, Moscow/Leningrad, 1949, 396 pages, 11 rubles 50 kopeks.

Laboratory handbook

SO: Uspekhi Khimii, Vol 18, #6, 1949; Vol 19, #1, 1950 (W-10083)

YAKOVLEV, K. P.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 414 - I

Call No.: AF628136

BOOK

Author: YAKOVLEV, K. P., Professor

Full Title: MATHEMATICAL TREATMENT OF MEASURING RESULTS, 2nd ed.

Transliterated Title: Matematicheskaya obrabotka rezul'tatov izmereniy

Publishing Data

Originating Agency: None

Publishing House: State Publishing House of Technical and Theoretical Literature

Date: 1953

No. pp.: 383

No. of copies: 15,000

Editorial Staff: None

Text Data

Coverage: The book is concerned mainly with methodical problems of mathematical treatment of the results of measurements. There are a large number of examples. Tables, graphs.

To follow some parts of this book knowledge of calculus is necessary. The large number of examples facilitate its study.

TABLE OF CONTENTS

Introduction. Basic Problems of the Mathematical Processing of the Measuring Results.

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| Ch. II Basic Arithmetic Operations with Approximate Values of Numbers | 18-46 |
| | 47-79 |

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Matematicheskaya obrabotka rezul'tatov izmereniy

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| Ch. IV Law of a Normal Distribution of Accidental Errors | 128-158 |
| Ch. V Indexes of the Accuracy of Measurements | 159-200 |
| Ch. VI Basic Examples of the Graphical Analysis of Measuring Results | 201-233 |
| Ch. VII Elements of Nomography | 234-256 |
| Ch. VIII Basic Procedures of Interpolation | 257-293 |
| Ch. IX Fundamentals of Harmonic Analysis | 294-325 |
| Ch. X Empiric Formulae | 326-372 |
| Appendixes, Bibliography, Index | 373-383 |

Purpose: This book may be used as a textbook by university students of the departments of physics and mathematics, and also by persons working in the field of physics and physical chemistry, as well as by technicians and engineers engaged in experimental work.

Facilities: None

No. of Russian and Slavic References: 4 before 1938 and 2 after that date.
Available: A.I.D., Library of Congress.

21(1;7)

PHASE I BOOK EXPLOITATION

BOV/2630

Yakovlev, Konstantin Pavlovich

Stroyeniye atoma i yadernyye protsessy (Atomic Structure and Nuclear Processes)
Moscow, Fizmatgiz, 1959. 140 p. (Series: Lektsionnyye demonstratsii po
fizike, vyp. 9) 10,000 copies printed.

Ed. (Title page): A.B. Mlodzeyevskiy, Professor; Ed. (Inside book):
I.V. Estulin; Tech. Ed.: V.N. Kryuchkova.

PURPOSE: This manual is meant for physics teachers in schools of higher
education and higher technical education and also for laboratory assistants
and other personnel of physics departments who prepare and conduct class
demonstrations. It may serve as a handbook for the selection and mounting
of apparatus and the choice of radioactive preparations.

COVERAGE: This book is the ninth and last issue in the series "Lektsionnyye
demonstratsii po fizike" (Lecture Demonstrations in Physics). It includes
description of 36 class demonstrations which can be used during classes
on nuclear physics in schools of higher education. The author, who is one

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Atomic Structure and Nuclear Processes

SOV/2639

of the oldest professors of Moscow State University, drew on his own pedagogical experience and on the experience of the Institute of Physics, Moscow State University. The author thanks Senior Scientific Worker I.V. Estulin, Candidate of Physical and Mathematical Sciences, who helped write Chapter VII and other parts of the book, as well as S.I. Usagin, Assistant, and V.S. Yegorov, Senior Laboratory Assistant of the Fizicheskiy Kabinet (Physics Study Center) of Moscow University, for their help in preparing the book. A list of ten titles recommended for reading is given at the end of Chapter I.

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Atomic Structure and Nuclear Processes

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Recommended literature

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Ch. II. Structure of the Atom

1. X-ray scattering
2. Compton scattering of γ quanta (I.V. Estulin)
3. The photoelectric effect and the Compton effect (I.V. Estulin)
4. Stable configurations in the motion along circular orbits
5. Model for experiments with α -particle scattering

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Ch. III. General Properties of Radioactive Radiation

6. Luminescent effects of radioactive radiation
7. Chemical effects of radioactive radiation
8. Ionizing effects of radioactive radiation
9. Thermal effects of radioactive radiation

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Ch. IV. Natural Radioactivity

10. The relative activity of substances with natural radioactivity
11. The radioactivity of potassium and rubidium

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Card 3/5

ZINOV'YEV, V.A.; SVESHNIKOV, G.N.; SNITKO, I.K.; YAKOVLEV, K.P., red.;
RYDNIK, V.I., red.; AKHLAMOV, S.N., tekhn.red.

[Short handbook on physics and mechanics] Kratkii fiziko-
tekhnicheskii spravochnik. Moskva, Gos.izd-vo fiziko-matem.
lit-ry. Vol.2. [General mechanics, strength of materials,
theory of mechanisms and machines] Obshchaya mekhanika, sopro-
tivlenie materialov, teoriya mekhanizmov i mashin. 1960. 411 p.
(MIRA 13:12)

(Mechanics) (Strength of materials) (Machinery)

YAKOVLEV, K.P.; LUNTS, G.L.; YANPOL'SKIY, A.R.; BRONSHTEYN, I.N., red.;
GUROV, K.P., red.; KUZNETSOVA, Ye.B., red.; AKHLAMOV, S.N.,
tekhn.red.

[Concise manual of physics and engineering] Kratkii fiziko-
tekhnicheskii spravochnik. Moskva, Gos.izd-vo fiziko-matem.
lit-ry. Vol.1. [Mathematics, physics] Matematika, fizika.
1960. 446 p. (MIRA 13:5)
(Mathematics--Handbooks, manuals, etc.)
(Physics--Handbooks, manuals, etc.)

ZINOV'YEV, V.A.; SVESHNIKOV, G.N.; SNITKO, I.K.; YAKOVLEV, K.P.,
red.; RYDNIK, V.I., red.; KOLESNIKOVA, A.P., tekhn. red.

[Concise physical and technological handbook] Kratkiy fiziko-
tekhnicheskii spravochnik. Moskva, Fizmatgiz. Vol.2. [General
mechanics, strength of materials, theory of mechanisms and
machinery] Obshchaya mekhanika, soprotivlenie materialov, teoriya
mekhanizmov i mashin. 1962. 417 p. (MIRA 15:12)
(Mechanics) (Strength of materials) (Mechanical engineering)

KHOLODOVSKIY, G.Ye.; SMIRNOV, A.D.; KARASEV, M.D.; YAKOVLEV, K.P.,
red.; STEPANOV, Yu.A., red.; KRYUCHKOVA, V.N., tekhn. red.

[Concise physical and technological handbook] Kratkii fiziko-
tekhnicheskii spravochnik. Moskva, Gos. izd-vo fiziko-matem.
lit-ry. Vol.3. [Heat engineering, electrical engineering,
radio engineering, and electronics] Teplotekhnika, elektro-
tekhnika, radiotekhnika i elektronika. 1962. 686 p.
(MIRA 15:3)

(Physics)

(Technology)

ALEKSEYEV, Georgiy Nikolayevich; YAKOVLEV, K.P., doktor fiz.-matem.
nauk, prof., red.; MELEEV, A.S., red.; LARIONOV, G.Ye.,
tekh. red.

[Direct conversion of various forms of energy into electric
and mechanical power] Neposredstvennoe prevrashchenie raz-
lichnykh vidov energii v elektricheskuyu i mekhanicheskuyu.
Pod red. K.P. Iakovleva. Moskva, Gosenergoizdat, 1963. 335 p.
(MIRA 16:7)

(Fuel cells) (Thermoelectric generators)

YAKOVLEV, K.P.

First papers on radioactivity at the Institute of Physics of
Moscow University during 1900-1930 Ist. i metod. est. nauk
2:298-307 '63. (MIRA 16:11)

IVERONOVA, V.I., prof., red.; GRABOVSKIY, M.A., dots., red.;
KONONKOV, A.F., kand. fiz.-mate. nauk, red.; MALOV, N.N.,
prof., red.; TELESNIN, R.V., prof., red.; USAGIN, S.I.,
st. prepod., red.; YAKOVLEV, K.P., prof., red.; YAKOVLEV,
I.A., prof., red.

[Methodology and technique of lecture demonstrations in
physics; transactions] Metodika i tekhnika leksionnykh
demonstratsii po fizike; sbornik trudov. Moskva, Izd-vo
Mosk. univ., 1964. 280 p. (MIRA 17:5)

1. Mezhvuzovskaya konferentsiya po leksionnym demonstra-
tsiyam po kursu obshchey fiziki. lst.

KRAVTSOV, Aleksandr Feodos'yevich; ALEKSEYEV, Boris Grigor'yevich;
Prinimali uchastiye: ALUYEV, A.Ye., assistant; YAKOVLEV, K.S.,
laborant. RAYTBURD, L., red.; GORKAVENKO, L., tekhn.red.

[Control and automatization of metallurgical processes;
laboratory work] Kontrol' i avtomatizatsiya metallurgicheskikh
protssessov; laboratornyi praktikum. Kiev, Gos.izd-vo tekhn.
lit-ry USSR. Pt.1. [Control and measuring apparatus] Kontrol'no-
izmeritel'nye pribory. 1959. 201 p. (MIRA 13:4)
(Metallurgical plants--Equipment and supplies)
(Automatic control)

YAKOVLEV, K.Ya.

Course of the development of the synthetic rubber industry in
1959-1965. Kauch. i rez. 17 no.10:1-5 0 '58. (MIRA 11:10)
(Rubber industry)

YAKOVLEV, L.

PA 7/49T58

USSR/Radio Equipment
Radio Broadcasting

Sep 48

"Radiofication of Farms in Orlov Oblast," L.
Yakovlev, 1 3/4 pp.

"Vest Svyazi - Pochta" No 9 (102)

Describes postwar reconstruction and extension of
communications in Oblast. Quotes figures showing
rapid development, and names those responsible for
it.

7/49T58

1. YAKOVLEV, L.
2. USSR (600)
4. Dnieper Hydroelectric Power Station
7. At the Dnieper Hydroelectric Power Station, Rad. zhiv., 7, No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

AUTHOR: Yakovlev, L. Candidate of Technical Sciences 29-58 5-5/26

TITLE: "Potok - 4" "Continuous Floating of Lumber."
("Potok - 4")

PERIODICAL: Tekhnika Molodezhi, 1958, Vol , Nr 5, p. 4 (USSR)

ABSTRACT: Astronomical numbers not only occur in astronomy, as the author says. During this year's shipping season more than 200 million pieces of timber will be supplied to industry in floats. This means that these pieces of timber arranged in one line would go 40 times around the equator. The floats are made in forest-yards. These yards are located at the borders between navigable and not navigable waters. A modern forest-yard has the necessary area, an electric power station, dikes, workshops and a settlement. Most of the work is done by machines. The idea of how to organize all the work at such a forest-yard came from the famous painter Kondrat Maksimov. Already at the beginning of the thirties an aggregate designed by him for the complex mechanization

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"Potok - 4"

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of the sorting out and assembling of floats was constructed. At present a mechanized line of 130 m length and of a weight of 400 t is being constructed. Because of its uninterrupted work it was called "Potok" (Stream). The characteristic of "Potok" is that almost no manual laborers work on it. There are 2 operators who sit in soft chairs in front of their control panels and direct operations; then there is a mechanic for service and 2 - 3 unskilled laborers. In the case of 3-shift work the "Potok" can do the work of more than 200 workers. This is, however, by far not the maximum capacity, and a project was completed already providing the replacement of 400 workers by "Potok". The "Potok" consists of float-assembling machines mounted on pontoons and connected with conveyor belts. In front of the aggregate there is the main part with a cabin (see color picture). In the rear part there is the drive for the conveyor belts, the distributor and the compressor. The beams of different sort and length, floating all together, are directed to the main part by the workers on the floats. There the conveyor belt directs them to the different sections. On their way electric

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eyes consisting of photoresistors inspect them carefully and direct them to their sections. The bracker controls the work of the photoresistors. By this double control no error can happen in sorting, the logs are directed according to their sort and length to their corresponding sectors. However, before the logs falls into this sector its volume is controlled by an automatic cubature apparatus. As soon as the amount of logs necessary for a float is collected, three hoists are put to action automatically which arrange the float, assemble it and bind it. This is, however, not the end of the line. A special registering apparatus prints on an aluminum plate the data concerning the number of logs, their total circumference and the type. The finished bundles signed this way are brought to the pier by a cutter; there, transport floats are made of them. A number of sections of this line- the wood counting machine, the collecting and binding machine as well as some others - are still unknown in the most progressive countries of the West. There are 2 figures.

Card 3/3

1. Lumber industry--USSR
2. Wood--Production

YAKOVLEV, L.

Being a communist calls for higher efficiency. Za bezop.dvizh.
4 no.2:1-2 F '62. (MIRA 15:5)

1. Instruktor Moskovskogo gorodskogo komiteta Kommunisticheskoy
partii Sovetskogo Soyuza. (Traffic safety)